### F. . ENT COOPERATION TREATY

### From the INTERNATIONAL BUREAU **PCT** Commissioner **US Department of Commerce** NOTIFICATION OF ELECTION **United States Patent and Trademark** Office, PCT (PCT Rule 61.2) 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 **ETATS-UNIS D'AMERIQUE** Date of mailing: in its capacity as elected Office 23 November 2000 (23.11.00) Applicant's or agent's file reference: International application No.: 2290362/MRO PCT/AU00/00437 Priority date: International filing date: 13 May 1999 (13.05.99) 11 May 2000 (11.05.00) Applicant: PANACCIO, Michael et al 1. The designated Office is hereby notified of its election made: in the demand filed with the International preliminary Examining Authority on: 11 September 2000 (11.09.00) in a notice effecting later election filed with the International Bureau on: 2. The election was was not made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer:

J. Zahra

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

# PATENT COOPERATEN TREATY

#### PCT

NOTICE INFORMING THE APPLICANT OF THE **COMMUNICATION OF THE INTERNATIONAL** APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

#### From the INTERNATIONAL BUREAU

OLIVE, Mark, R. **Davies Collison Cave** 1 Little Collins Street Melbourne, VIC 3000 **AUSTRALIE** 

TUESDAY, - 5 UEC 2000

**IMPORTANT NOTICE** 

23 November 2000 (23.11.00)

Applicant's or agent's file reference 2290362/MRO

Date of mailing (day/month/year)

International application No. PCT/AU00/00437

International filing date (day/month/year) 11 May 2000 (11.05.00)

Priority date (day/month/year) 13 May 1999 (13.05.99)

**Applicant** 

PFIZER PRODUCTS INC et al

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice: AG, AU, DZ, KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CN,CR,CU,CZ,DE,DK,DM,EA,EE,EP,ES,FI,GB,GD, GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX, NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 23 November 2000 (23.11.00) under No. WO 00/69904

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

J. Zahra

Telephone No. (41-22) 338.83.38

Form PCT/IB/308 (July 1996)

Facsimile No. (41-22) 740.14.35

3661144

0	For receiving Office use only	
0 2-1	International Application No.	
٠,	monatona / ppiloation //o.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
	miternational Application	
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.90
		(updated 08.03.2000)
0-5	Petition	
	The undersigned requests that the	
	present international application be processed according to the Patent	
	Cooperation Treaty	
0-6	Receiving Office (specified by the	Australian Patent Office (RO/AU)
^ 7	applicant)	
0-7	Applicant's or agent's file reference	2290362/MRO
ı	Title of invention	NOVEL LAWSONIA SSP. GENE AND USES
		THEREFOR IV
11	Applicant -	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
11-4	Name	PFIZER PRODUCTS INC
II-5	Address:	Eastern Point Road
		Groton, CT 06340
		United States of America
11-6	State of nationality	US
11-7	State of residence	US
11-1	Applicant and/or inventor	
II-1-1	This person is:	applicant only
II-1-2	Applicant for	all designated States except US
II-1 <b>-</b> 4	Name	AGRICULTURE VICTORIA SERVICES PTY LTD
II-1-5	Address:	475 Mickleham Road
		Attwood, Victoria 3049
		Australia
II-1 <i>-</i> 6	State of nationality	AU
II-1-7	State of residence	
	Totale of residence	AU

111-2	Applicant and/or inventor	
III-2-1		applicant only
III-2-2	Applicant for	
111-2-4	PP	all designated States except US
III-2-5	Address:	PIG RESEARCH AND DEVELOPMENT CORPORATION
111-2-0	Address.	3rd Floor
		Industry House
		10 National Circuit
	1	Barton, Australian Capital Territory
		2600
III-2- <b>6</b>	State of nationality	Australia
	State of nationality	AU
111-2-7	State of residence	AU
III-3 III-3-1	Applicant and/or inventor This person is:	••
III-3-1	Applicant for	applicant and inventor
III-3-2 III-3-4	' '	US only
	Name (LAST, First)	PANACCIO, Michael
111-3-5	Address:	112 Hill Road
	-	North Balwyn, Victoria 3104
		Australia
III-3- <del>6</del>	State of nationality	AU
III-3-7	State of residence	AU
III-4 III-4-1	Applicant and/or inventor	
	This person is:	applicant and inventor
III-4-2	Applicant for	US only
111-4-4	Name (LAST, First)	ROSEY, Everett Lee
III <b>-4-</b> 5	Address:	457 Route 164
		Preston, CT 06365
		United States of America
III <b>-4-</b> 6	State of nationality	us
III-4-7	State of residence	us
III-5	Applicant and/or inventor	
III-5-1	This person is:	applicant and inventor
III-5-2	Applicant for	US only
III-5 <del>-</del> 4	Name (LAST, First)	SINISTAJ, Meri
111-5-5	Address:	3/60 Gourlay Street
	}	East St. Kilda, Victoria 3183
	· .	Australia
III-5 <b>-</b> 6	State of nationality	AU
111-5-7	State of residence	AU
	<del></del>	1

	<del></del>	
III-6 III-6-1	Applicant and/or inventor This person is:	annlicent and inventor
III-6-2	Applicant for	applicant and inventor
III-6-4	Name (LAST, First)	US only
III-6-5	Address:	HASSE, Detlef
111-0-3	Address.	4 Scullin Court
	i	Sunbury, Victoria 3429
	State of calls are	Australia
III-6-6	State of nationality	AU
111-6-7	State of residence	AU
111-7 111-7-1	Applicant and/or inventor This person is:	amaliant and inventor
III-7-2	Applicant for	applicant and inventor
111-7-4	Name (LAST, First)	US only
111-7-5		PARSONS, Jim
111-7-5	Address:	11 Kanandah Court
		Research, Victoria 3095
		Australia
III-7 <b>-</b> 6	State of nationality	AU
111-7-7	State of residence	AU
III-8 III-8-1	Applicant and/or inventor	
	This person is:	applicant and inventor
III-8-2	Applicant for	US only
111-8-4	Name (LAST, First)	ANKENBAUER, Robert Gerard
III-8-5	Address:	104 Castle Hill Road
		Pawcatuck, CT 06379
		United States of America
III-8-6	State of nationality	US
III-8-7	State of residence	US
IV-1	Agent or common representative; or	
	address for correspondence The person identified below is	agent
	hereby/has been appointed to act on	agenc
	behalf of the applicant(s) before the competent International Authorities as:	
IV-1-1	Name (LAST, First)	OLIVE, Mark, R
IV-1-2	Address:	DAVIES COLLISON CAVE
		1 LITTLE COLLINS STREET
		MELBOURNE, Victoria 3000
		Australia
IV-1-3	Telephone No.	+61 3 9254 2777
IV-1-4	Facsimile No.	+61 3 9254 2770
IV-2	Additional agent(s)	additional agent(s) with same address as
		first named agent
IV-2-1	Name(s)	SLATTERY, John, M; CAINE, Michael, J
	1	Townstake, comm, M. CAINE, MICHAEL, C

### **PCT REQUEST**

Designation of States Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses	AP: GH GM KE LS MW SD SL SZ TZ UG ZW and
any, are specified between parentheses	o
Tally, are specified between percimited	any other State which is a Contracting
after the designation(s) concerned)	State of the Harare Protocol and of the
	PCT
	EA: AM AZ BY KG KZ MD RU TJ TM and any
	other State which is a Contracting State
	of the Eurasian Patent Convention, and of
	·
	the PCT
	EP: AT BE CHELI CY DE DK ES FI FR GB GR
	IE IT LU MC NL PT SE and any other State
	which is a Contracting State of the
	European Patent Convention and of the
	PCT
	OA: BF BJ CF CG CI CM GA GN GW ML MR NE
	SN TD TG and any other State which is a
	member State of OAPI and a Contracting
	State of the PCT
National Date of	AE AG AL AM AT AU AZ BA BB BG BR BY CA
any, are specified between parentheses	CH&LI CN CR CU CZ DE DK DM DZ EE ES FI
after the designation(s) concerned)	GB GD GE GH GM HR HU ID IL IN IS JP KE
	KG KP KR KZ LC LK LR LS LT LU LV MA MD
	MG MK MN MW MX NO NZ PL PT RO RU SD SE
	SG SI SK SL TJ TM TR TT TZ UA UG US UZ
	VN YU ZA ZW
Precautionary Designation Statement	
In addition to the designations made	
under items V-1, V-2 and V-3, the	
all designations which would be	
permitted under the PCT except any	
declares that those additional	
designations are subject to confirmation	• •
and that any designation which is not confirmed before the expiration of 15	
months from the priority date is to be	
regarded as withdrawn by the applicant	
at the expiration of that time limit.	NONE
	HONE
Priority claim of earlier national	
	13 May 1999 (13.05.1999)
Number	60/133,973
Country	US
International Searching Authority	Australian Patent Office (ISA/AU)
	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.  Exclusion(s) from precautior ary designations  Priority claim of earlier national application Filing date Number Country

VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	5	-
VIII-2	Description (excluding sequence listing part)	62	-
VIII-3	Claims	6	-
VIII-4	Abstract	1	2290362.txt
VIII-5	Drawings	3	-
VIII-6	Sequence listing part of description	9	<u> </u>
VIII-7	TOTAL	86	-
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	<b>✓</b>	-
VIII-9	Separate signed power of attorney	<b>√</b>	-
VIII-15	Nucleotide and/or amino acid sequence listing in computer readable form		separate diskette
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	Figure of the drawings which should accompany the abstract		
VIII-19	Language of filing of the international application	English	
IX-1	Signature of applicant or agent	K Ullio	
IX-1-1	Name (LAST, First)	OLIVE, Mark, R	

### FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/AU
10-6	Transmittal of search copy delayed until search fee is paid	

### FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by	
	the International Bureau	
	the international Dates	

# PATENT COOPERATON TREATY

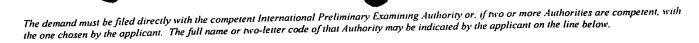
From the INTERNATIONAL PRELIMINARY	EXAMINING AUTHORIT	ГҮ	PCT		
To: Agent :  DAVIES COLLISON CAVE 1 Little Collins Street MELBOURNE VIC 3000			PCT Vining		
		NOTIFICATION OF RECEIPT OF DEMAND BY COMPETENT INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY			
		(PCT Rule and Admir	e 59.3(e) and 61.1(b), first sentence histrative Instructions, Section 601(a))		
		Date of mailing (day/month/year)	18 SEP 2000 ', (18/9/00)		
Applicant's or agent's file reference 2290362		ІМР	ORTANT NOTIFICATION		
International application No. PCT/AU00/00437	International filing date (da 11 MAY 2000 (11/	ry/month/year) 5/00)	Priority date (day/month/year) 13 MAY 1999 (13/5/99)		
Applicant Pfizer Products I	nc. (et al.)				
The applicant is hereby <b>notified</b> that date of receipt of the demand for interest.	this International Preliminar national preliminary examina	y Examining Authori ation of the internation	ty considers the following date as the nal application:		
_	11 SEP 2000 (1	1/9/00)	<del></del>		
			·		
2. That date of receipt is:	receipt of the demand by this	Authority (Rule 61	1(b))		
the date on which	the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).  the date on which this Authority has, in response to the Invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.				
3. Attention: That date of r	eceipt is <b>AFTER</b> the expiration	on of 19 months fron	the priority date. Consequently, the		
Attention: I that date of receipt is Artention of The Mills of the Capitation of The Mills of the Capitation of The Mills of the Capitation of The Mills of the M					
(If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:					
_					
4. Only where paragraph 3 applies, a c	opy of this notification has b	een sent to the Interr	ational Bureau.		
Name and mailing address of the IPEA/	AU I	Authorized officer			
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, A			JOSEPH BRESIC		

02 6283 2357

Telephone No.

Facsimile No. 02 6285 3929 Form PCT/IPEA/402 (July 1998)

E-mail: pct@ipaustralia.gov.au



!PEA/
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# **PCT**

**CHAPTER II** 

### **DEMAND**

under Article 31 of the Patent Cooperation Treaty: The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

Identification of IPEA	Date	of receipt of DE	EMAND
	N OF THE INTERNATIONAL A	PPLICATION	Applicant's or agent's file reference 2290362/MRO
International application No.	International filing date (day/mo		(Earliest) Priority date (day/month/year)
PCT/AU00/00437	11 May, 2000 (11/5/00)		13 May, 1999 (13/5/99)
Title of invention  Lawsonia derived gene and	related FlgE polypeptides, p	eptides and pr	roteins and their uses
Box No. II - APPLICANT(S)			
Name and address: (Family name followe The address must incl	d by given name: for a legal entity, full official oude postal code and name of country.)	lesignation.	Telephone No.:
PFIZER PRODUCTS INC			Facsimile No.:
Eastern Point Road			
Groton, CT 06340 United States of America			Teleprinter No.:
State (that is, country) of nationality	Stat	e (that is, country)	of residence:
UNITED STATES OF AM	EDICA	πτεν στατί	CC AL AMEDICA
UNITED STITLES OF THE	Didoir		ES OF AMERICA
Name and address: (Family name follow AGRICULTURE VICTOR 475 Mickleham Road Attwood VIC 3049 Australia	ed by given name: for a legal entity, full official IA SERVICES PTY. LTD.	designation. The addres	ss must include postal code and name of country.)
Name and address: (Family name follow AGRICULTURE VICTOR 475 Mickleham Road Attwood VIC 3049 Australia State (that is, country) of nationality AUSTRALIA	ed by given name: for a legal entity, full official IA SERVICES PTY. LTD.	designation. The address tte (that is, country USTRALIA	ss must include postal code and name of country.)  y) of residence:
Name and address: (Family name follow AGRICULTURE VICTOR 475 Mickleham Road Attwood VIC 3049 Australia  State (that is, country) of nationality AUSTRALIA  Name and address: (Family name follow PIG RESEARCH AND DI 3rd Floor, Industry House 10 National Circuit Barton, Australian Capital 2600	ed by given name: for a legal entity, full official IA SERVICES PTY. LTD.  State  A  The description of the second	designation. The address te (that is, country USTRALIA designation. The address	ss must include postal code and name of country.)
Name and address: (Family name follow AGRICULTURE VICTOR 475 Mickleham Road Attwood VIC 3049 Australia  State (that is, country) of nationality AUSTRALIA  Name and address: (Family name follow PIG RESEARCH AND DI 3 <sup>rd</sup> Floor, Industry House 10 National Circuit Barton, Australian Capital	ed by given name: for a legal entity, full official IA SERVICES PTY. LTD.  State of the given name: for a legal entity, full official EVELOPMENT CORPORA  Territory  State of the given name: for a legal entity, full official EVELOPMENT CORPORA  Territory	designation. The address te (that is, country USTRALIA designation. The address	es must include postal code and name of country.)  of residence:  ess must include postal code and name of country.)

International application no. PCT/AU00/00437

## Continuation of Box No. II APPLICANT(S) If none of the following sub-boxes is used, this sheet should not be included in the demand. Name and address: (Family name followed by given name: for a legal entity, full official designation. The address must include postal code and name of country.) PANACCIO, Michael 112 Hill Road North Balwyn, Victoria 3104 Australia State (that is, country) of residence: State (that is, country) of nationality: **AUSTRALIA** AUSTRALIA Name and address: (Family name followed by given name: for a legal entity, full official designation. The address must include postal code and name of country.) ROSEY, Everett Lee 457 Route 164\_\_\_. Preston, CT 06365 United States of America State (that is, country) of residence: State (that is, country) of nationality: UNITED STATES OF AMERICA UNITED STATES OF AMERICA Name and address: (Family name followed by given name: for a legal entity, full official designation. The address must include postal code and name of country.) SINISTAJ, Meri 3/60 Gourlay Street East St. Kilda, Victoria 3183 Australia State (that is, country) of residence: State (that is, country) of nationality: **AUSTRALIA AUSTRALIA** Name and address: (Family name followed by given name: for a legal entity, full official designation. The address must include postal code and name of country.) HASSE, Detlef 4 Scullin Court Sunbury, Victoria 3429 Australia State (that is, country) of nationality: State (that is, country) of residence: Australia Australia

Form PCT/IPEA/401 (continuation sheet) (July 1998; reprinted July 2000)

X Further applicants are indicated on another continuation sheet.

Sheet No. 3

International application no. PCT/AU00/00437

Continuation of Box No. II APPLICANT(S)				
If none of the following sub-boxes is used, this sheet show				
Name and address: (Family name followed by given name: for a legal	l entity, full official designation. The address must include postal code and name of country.)			
PARSONS, Jum 11 Kanandah Court Research, Victoria 3095 Australia	.*			
State (that is, country) of nationality: AUSTRALIA	State (that is, country) of residence: AUSTRALIA			
	l entity, full official designation. The address must include postal code and name of country.)			
ANKENBAUER, Robert Gerard 104 Castle Hill Road Pawcatuck, CT 06379 United States of America				
State (that is, country) of nationality: UNITED STATES OF AMERICA	State (that is, country) of residence: UNITED STATES OF AMERICA			
Name and address. (ramy name join over by garantee)	al entity, full official designation. The address must include postal code and name of country.)			
State (that is, country) of nationality:	State (that is, country) of residence:			
Name and address: (Family name followed by given name: for a leg	val entity, full official designation. The address must include postal code and name of country.)			
State (that is, country) of nationality:	State (that is, country) of residence:			
Further applicants are indicated on another cor	ntinuation sheet.			

S	heet	No	4

International application no. PCT/AU00/00437

Box No. III AGENT OR COMMON REPRESENTATIVE: OR ADDRESS	FOR CORRESPONDENCE			
The following person is X agent common representative				
and X has been appointed earlier and represents the applicant(s) also for international pr	reliminary examination.			
is hereby appointed and any earlier appointment of (an) agent(s)/common represe	entative is hereby revoked.			
is hereby appointed, specifically for the procedure before the International Prelim	inary Examining Authority, in addition to			
the agent(s)/common representative appointed earlier.  Name and address: (Family name followed by given name: for a legal entity, full official designation.	Telephone No.:			
The address must include postal code and name of country.)	+61 3 9254 2777			
OLIVE, Mark R DAVIES COLLISON CAVE	Facsimile No.:			
SLATTERY, John M 1 Little Collins Street	+61 3 9254 2770			
CAINE, Michael J Melbourne, Victoria 3000 Australia	Teleprinter No.:			
Address for correspondence: Mark this check-box where no agent or common the space above is used instead to indicate a special address to which correspondence.				
Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINAT	TION			
Statement concerning amendments:*				
1. The applicant wishes the international preliminary examination to start on the basis	of:			
X the international application as originally filed				
the description X as originally filed				
as amended under Article 34				
the claims X as originally filed				
as amended under Article 19 (together with any accompanying statement)				
as amended under Article 34				
the drawings x as originally filed				
as amended under Article 34				
2. The applicant wishes any amendment to the claims under Article 19 to be consi	dered as reversed.			
3. The applicant wishes the start of the international preliminary examination to months from the priority date unless the International Preliminary Examining A made under Article 19 or a notice from the applicant that he does not wish to make the check-box may be marked only where the time limit under Article 19 has not yet.	authority receives a copy of any amendments take such amendments (Rule 69. 1(d)). This			
<ul> <li>Where no check-box is marked, international preliminary examination will start on the originally filed or, where a copy of amendments to the claims under Article 19 and/or a under Article 34 are received by the International Preliminary Examining Authority bef opinion or the international preliminary examination report, as so amended.</li> </ul>	mendments of the international application			
Language for the purposes of international preliminary examination: ENGLISH				
X which is the language in which the international application was filed.				
which is the language of a translation furnished for the purposes of internatio	nal search.			
which is the language of publication of the international application.  which is the language of the translation (to be) furnished for the purposes of i	international preliminary examination.			
which is the language of the translation (to be) furnished for the purposes of the				
Box No. V ELECTION OF STATES				
The applicant hereby elects all eligible States (that is, all States which have been designated PCT)	d and which are bound by Chapter II of the			
Excluding the following States which the applicant wishes not to elect:				

#### Sheet No. 5

International application no. PCT/AU00/00437

Box No. VI CHECK LIST						
The demand is accompanied by the following e Box No. IV, for the purposes of international pa	elements, in the language referred to in reliminary examination:	For International Preliminary Examining Authority use only				
2011-101-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	•	received not received				
translation of international application	: sheets					
2. amendments under Article 34	: sheets					
copy (or, where required, translation) of amendments under Article 19	: sheets					
4. copy (or, where required, translation) of statement under Article 19	: sheets					
5. letter	: 1 sheets					
6. other (specify)	: sheets					
The demand is also accompanied by the item(s)	) marked below:					
fee calculation sheet		ent explaining lack of signature				
2. separate signed power of attorney		ide and or amino acid sequence listing in er readable form				
copy of general power of attorney: reference number, if any:	6. other (s	pecify):				
Box No. VII SIGNATURE OF APP	PLICANT, AGENT OR COMMON I	REPRESENTATIVE				
Next to each signature, indicate the name of the person signi	ing and the capacity in which the person signs (if such	h capacity is not obvious from reading the demand).				
OLIVE, Mark R For and on behalf of the applicant/s						
For Inter	national Preliminary Examining Auth	nority use only				
Date of actual receipt of DEMAND:	,					
Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):						
The date of receipt of the demand is from the priority date and item 4 or	s AFTER the expiration of 19 months 5, below, does not apply.	The applicant has been informed accordingly.				
Rule 80.5.		the priority dated as extended by virtue of				
5. Although the date of receipt of the is EXCUSED pursuant to Rule 82.	demand is after the expiration of 19 mont	ths from the priority dated, the delay in arrival				
	For International Bureau use only					
Demand received from IPFA on:	•					

REC'D \_ 3 OCT 2000

- )3/1

# INTERNATIONAL PRELIMINARY EXAMINATION REPORTO

PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2290362	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).		
International application No.	International filing date	date (day/month/year) Priority Date (day/month/year)		
PCT/AU00/00437	11 May 2000	13 May 1999		
International Patent Classification (IPC)	or national classification	on and IPC		
Int. Cl. 7 C07K 14/195, C12N 15/3	1, A61K 39/02, A61P	1/00, C07K 16/12,	C12Q 1/04, G01N 33/537	
Applicant PIG RESEARCH AND DE	VELOPMENT CORP	PORATION et al		
This international preliminary     Authority and is transmitted to	examination report has to the applicant according	been prepared by this g to Article 36.	International Preliminary Examining	
2. This REPORT consists of a to	tal of 3 sheets, include	ling this cover sheet.		
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).				
These annexes consist of a tot	al of sheet(s).			
3. This report contains indications relat	ing to the following iten	ns:	·	
I X Basis of the report	rt			
II Priority				
III Non-establishme	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability			
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;				
VI Certain documen				
VII Certain defects in	VII Certain defects in the international application			
VIII Certain observati				
Date of submission of the demand		Date of completion of the	he report	
11 September 2000  Name and mailing address of the IPEA/AU		27 September 2000 Authorized Officer		
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929  K. LEVER Telephone No. (02) 6283 2254				

### PCT/AU00/00437

I.	·	Basis of the report	
1.	With	_	ts of the international application:*
	X	the international ap	plication as originally filed.
		the description,	pages , as originally filed,
			pages , filed with the demand,
			pages , received on with the letter of
		the claims,	pages , as originally filed,
			pages , as amended (together with any statement) under Article 19,
			pages , filed with the demand,
			pages, received on with the letter of
		the drawings,	pages , as originally filed,
			pages , filed with the demand,
			pages, received on with the letter of
		the sequence listing	part of the description:
			pages , as originally filed
			pages , filed with the demand pages , received on with the letter of
			F-0
2.	With	regard to the langua	ge, all the elements marked above were available or furnished to this Authority in the language in plication was filed, unless otherwise indicated under this item.
	These	e elements were avai	able or furnished to this Authority in the following language which is:
			anslation furnished for the purposes of international search (under Rule 23.1(b)).
		the language of pub	olication of the international application (under Rule 48.3(b)).
		the language of the and/or 55.3).	translation furnished for the purposes of international preliminary examination (under Rules 55.2
3.		regard to any nucleo	tide and/or amino acid sequence disclosed in the international application, was on the basis of
		_	ernational application in written form.
	$\mathbf{x}$	filed together with	the international application in computer readable form.
	$\Box$	furnished subseque	ntly to this Authority in written form.
•		furnished subseque	ntly to this Authority in computer readable form.
			the subsequently furnished written sequence listing does not go beyond the disclosure in the cation as filed has been furnished.
		The statement that been furnished	the information recorded in computer readable form is identical to the written sequence listing has
4.		The amendments h	ave resulted in the cancellation of:
		the descript	on, pages
		the claims,	Nos.
		the drawing	s, sheets/fig.
5.			n established as if (some of) the amendments had not been made, since they have been considered
*	Dan!-		sclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**  ave been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this
•	repor	t as "originally filed" (	and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).
**	Any r	eplacement sheet conta	tining such amendments must be referred to under item 1 and annexed to this report

<b>V.</b>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement			
1.	Statement			
	Novelty (N)	Claims 1-39	YES	
		Claims	NO	
	Inventive step (IS)	Claims 1-39	YES	
		Claims	NO	
	Industrial applicability (IA)	Claims 1-39	YES	
		Claims	NO	

2. Citations and explanations (Rule 70.7)

#### Citations:

D1: Veterinary Pathology (March 1998) 35 (2) 153-6. Boye M et al. 'Specific Detection of Lawsonia intracellularis in Porcine Proliferative Enteropathy Inferred from Fluorescent rRNA In Situ Hybridization'.

D2: WO 9639629 A1 (NOBL LABORATORIES INC) 12 December 1996.

D3: WO 9720050 A1 (PIG RESEARCH & DEVELOPMENT CORP ET AL) 5 June 1997.

### Explanation:

The present application is directed to an isolated or recombinant immunogenic polypeptide, which comprises, mimics or cross-reacts with a B-cell or T-cell epitope of the Flagellar Hook (FlgE) polypeptide derived from *Lawsonia spp*. The above-cited documents all refer to *Lawsonia spp* but do not disclose or suggest the FlgE polypeptide. Sequence 1 of the current application is not disclosed in the cited documents.

Therefore it is considered that claims 1-39 are novel, inventive and demonstrate industrial applicability.

# PATENT COOPERATION TREATY

# **PCT**

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2290362/MRO	FOR FURTTIER see Notification of Transmittal of International Search Report  ACTION (Form PCT/ISA/220) as well as, where applicable, item 5 below.				
International application No.	International filing date	nal filing date (day/month/year) (Earliest) Priority Date (day/month/year)			
PCT/AU00/00437	11 May 2000		13 May 1999		
Applicant PIG RESEARCH AND DE	VELOPMENT CORI	PORATION et al			
This international search report has been preparticle 18. A copy is being transmitted to the	pared by this International e International Bureau.	Searching Authority a	nd is transmitted to the applicant according to		
This international search report consists of a	total of 3 sheets.				
X It is also accompanied by a	copy of each prior art docu	ıment cited in this repo	rt.		
1. Basis of the report					
<ul> <li>With regard to the language, the which it was filed, unless otherwise.</li> </ul>	international search was o	carried out on the basis	of the international application in the language in		
			international application furnished to this		
	nd/or amino acid sequence quence listing:	ce disclosed in the inter	national application, the international search was		
contained in the internation	onal application in written	n form.			
X filed together with the int	ernational application in o	computer readable form	ı.		
furnished subsequently to	this Authority in written	form.			
furnished subsequently to	this Authority in compute	er readable form.			
application as filed has be	een furnished.		s not go beyond the disclosure in the international		
the statement that the info	ormation recorded in com	puter readable form is i	identical to the written sequence listing has been		
2. Certain claims were foun	d unsearchable (See Box	<b>c</b> I).			
3. Unity of invention is lack	ing (See Box II).				
4. With regard to the title,	the text is approved as	submitted by the applic	eaut.		
X	the text has been estab				
Lawsonia derived gene and re					
5. With regard to the abstract, X	the text is approved as s		•		
	the text has been establi The applicant may, with submit comments to this	in one month from the	e 38.2(b), by this Authority as it appears in Box III. date of mailing of this international search report,		
6. The figure of the <b>drawings</b> to be pub.	lished with the abstract is	Figure No.			
	as suggested by the appl		X None of the figures		
	because the applicant fa	iled to suggest a figure			
	because this figure bette	er characterizes the inve	ention		

### INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00437

Α.	CLASSIFICATION OF SUBJECT MATTER				
Int. Cl. 7:	C07K 14/195, C07H 21/04, A61K 39/02, A61P 1/00				
According to	International Patent Classification (IPC) or to both	national classification and IPC			
В.	FIELDS SEARCHED				
Minimum docu	mentation searched (classification system followed by cl	assification symbols)			
Documentation	searched other than minimum documentation to the exte	ent that such documents are included in the	he fields searched		
Electronic data STN: WPID: recombin	base consulted during the international search (name of S- Lawsonia, MEDLINE, HCA, BIOSIS- Laws ANGIS: sequence search	data base and, where practicable, search sonia, polypeptide, gene, protein, p	terms used) peptide, immunogen,		
C.	DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where app	ropriate, of the relevant passages	Relevant to claim No.		
A	Veterinary Pathology (March 1998) 35 (2) 15 Detection of Lawsonia intracellularis in Porc Inferred from Fluorescent rRNA In Situ Hybr	ine Proliferative Enteropathy	30-39		
A	WO 9639629 A1 (NOBL LABORATORIES whole document	1-39			
Α	WO 9720050 A1 (PIG RESEARCH & DEV. 1997. See whole document.	ELOPMENT CORP)5 June	1-39		
	Further documents are listed in the continuation	n of Box C X See patent fam	ily annex		
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance.  "Y" document of particular relevance in vention cannot be considered to involve an inventive step when the document of particular relevance in v					
Date of the act	ual completion of the international search	Date of mailing of the international sear	rch report 2000		
	7 June 2000  Tame and mailing address of the ISA/AU  Authorized officer				
PO BOX 200, E-mail address	N PATENT OFFICE WODEN ACT 2606, AUSTRALIA s: pct@ipaustralia.gov.au (02) 6285 3929	K. LEVER Telephone No : (02) 6283 2254			

# INTERNATIONAL SEARCH REPORT Information on patent family members

International application No. PCT/AU00/00437

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Paten	t Family Member		
wo	9639629	AU	62627/96	CA	2222643	EP	. 843818
		US	5885823	US	5714375		•
WO	9720050	AU	76141/96	CA	2236574	EP	871735
							END OF ANNEX